

North Dakota Department of Health's Radon Awareness Program

KIDS ZONE



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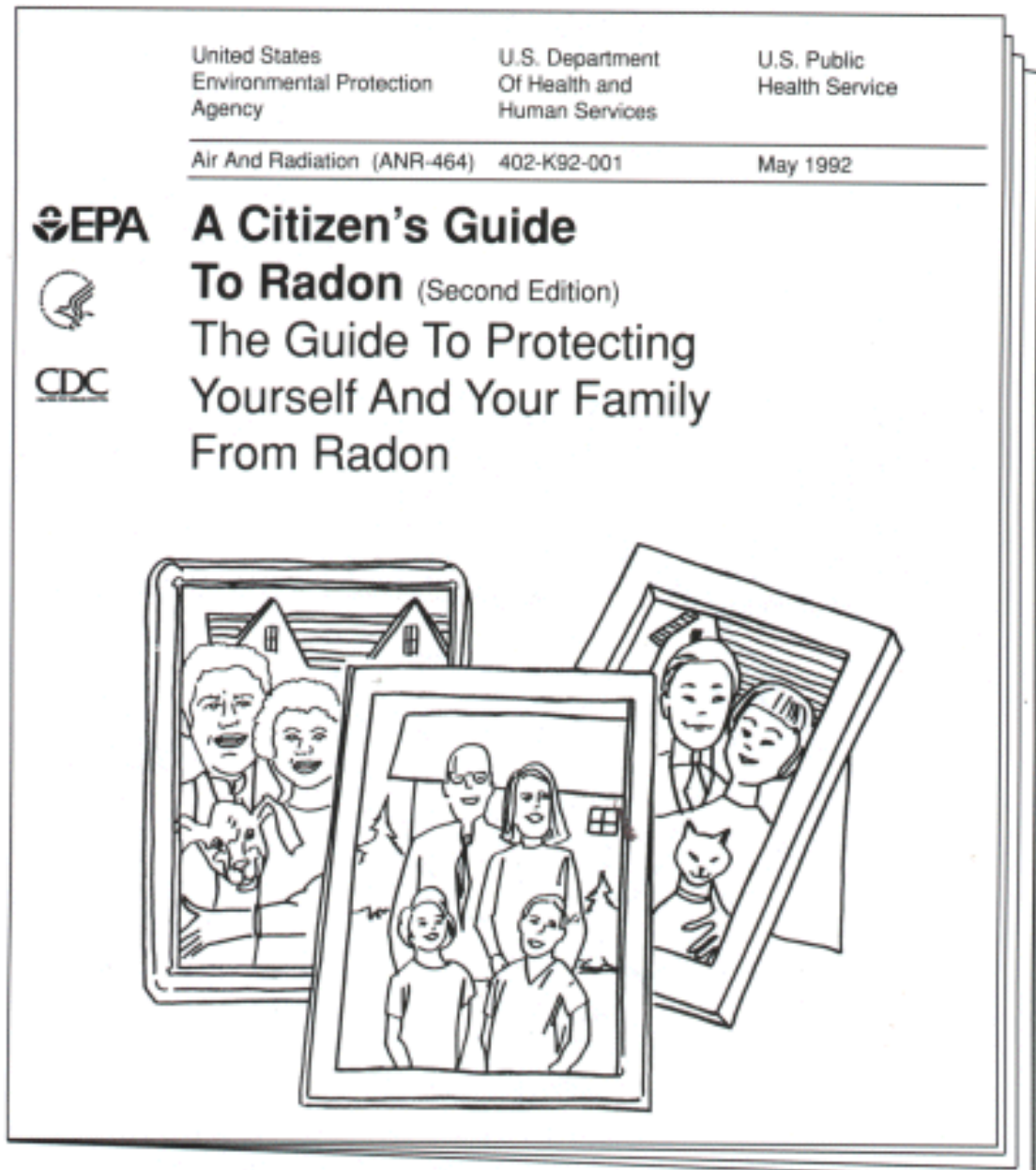


Nature has many mysteries that have fascinated people over the centuries. Where do tornados come from? What causes a dry summer, or a wet spring? There are many things that humans have wondered about and studied. Jason Andrews has been looking for a subject for his science report.

Jason has been sitting and thinking about nature's mysteries.

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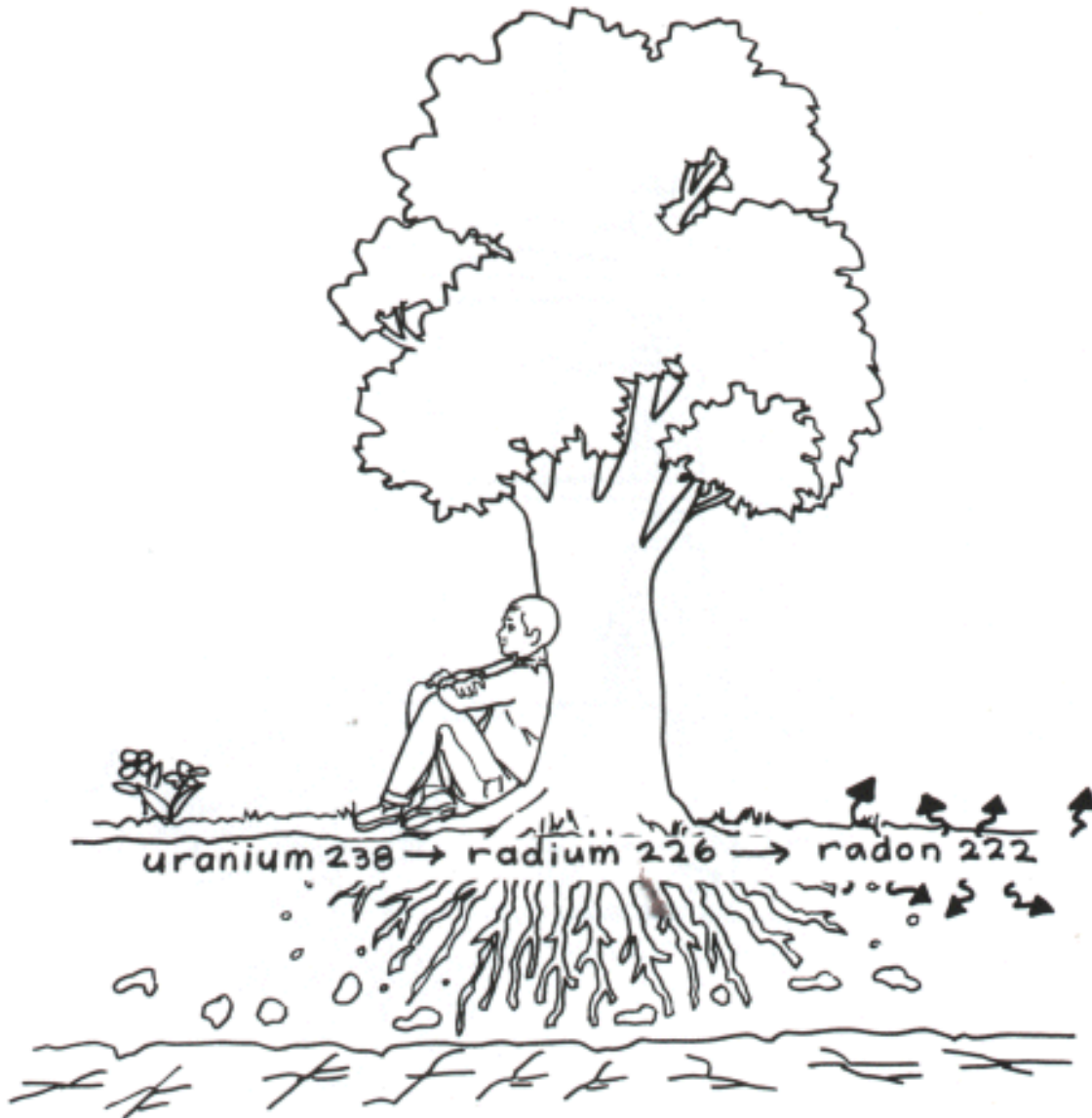
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Jason checked his local library. He read a brochure called "A Citizen's Guide to Radon". This brochure said that radon is a natural radioactive gas. You can't see, smell or taste radon, but it may be a problem in your home, because radon may harm your lungs if you breathe it.

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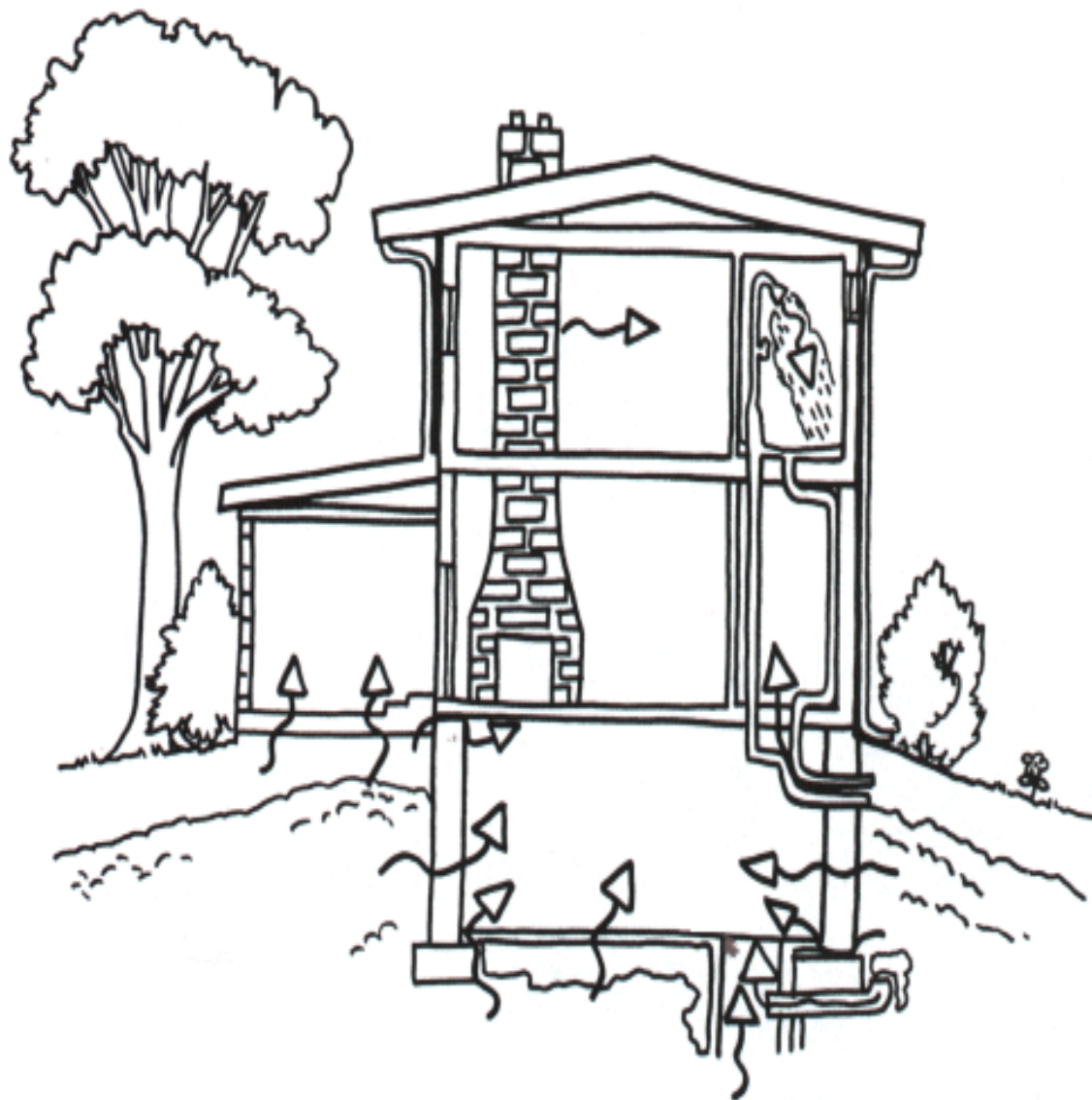
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Jason learned that radon comes from the breakdown, or decay, of a natural radioactive element called uranium-238. Uranium occurs in small amounts in all soil. When it decays, it first becomes another element called radium before it changes again to become radon. If the radon is near the surface or in the water in a well, it can sometimes get inside our homes and schools.

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Jason studied the different ways that radon could get into his home. He learned that radon could get in through openings in the house such as around pipes in the floor, where the floor and walls join, as well as through cracks in the basement floor. Radon could also enter through the crawl-space under his family room like in the picture above. Jason learned that radon could get into his home through any tiny space that came in contact with the ground.

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The brochure that Jason read at the library said the only way that he could find out if he had radon in his home was to test for it. Jason learned that he could buy a radon test kit at his local hardware store. Jason told his friend Ben about the radon test kit.

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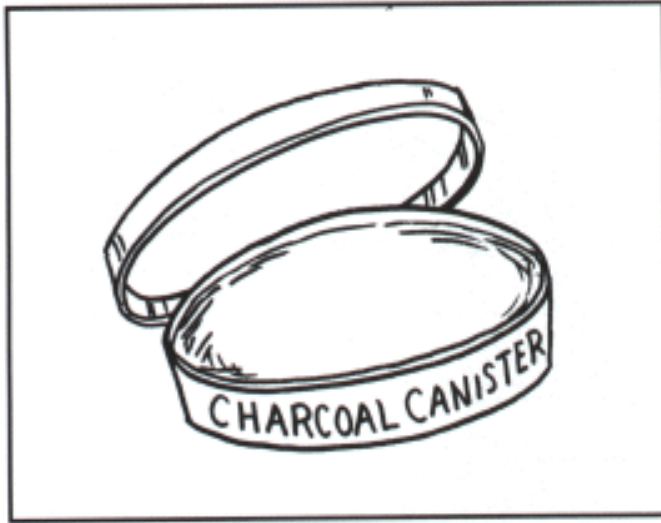
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Jason told his dad about his science project and asked if they could buy a radon test kit. Jason's dad said he would take Jason to the hardware store. Ben called and said he and his dad were going to the hardware store to get a radon test kit, too. So they all went together.

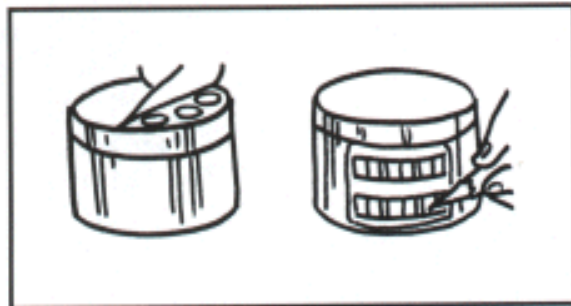
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CHARCOAL
CANISTER

ALPHA
TRACK
DETECTOR



There were two types of radon test kits at the hardware store where Jason and Ben visited. One type of kit that tests for radon is called an *activated charcoal test kit*. This type of test kit is for short-term tests (3-7 days) and may be shaped like a tin can with a lid (like the charcoal canister shown above) or it may be shaped like a white envelope that can be opened at one end. The other type of radon test kit available at the hardware store where Jason and Ben visited is called an *alpha track detector test kit* which is for long-term tests (three months or more). Jason decided he would use the *alpha track detector test kit*. His friend Ben bought an *activated charcoal test kit* shaped like a white envelope that had a closable opening at one end.

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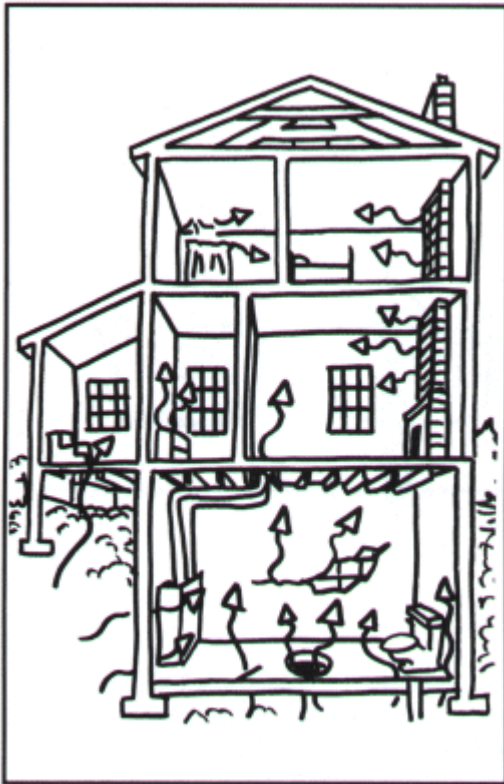
That night Jason explained the radon test to his family. Jason's mother helped him follow the directions



Jason and his mother knew they had to place the test in the lowest livable part of their home. Since they don't use the basement often, they placed the test kit in the family room on the first floor.

Jason's mother said the *alpha track detector test kit* is a "long term" test and that it would be three months before they sent it back to the laboratory to find out how much radon they had.

Ben had to keep the windows closed and all the fans off while his family tested because Ben's *activated charcoal test kit* is a "short-term" test. The canister or envelope is kept in the house for two to seven days before being sent to the laboratory. Results from both test kits are usually returned in one or two weeks.



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Jason's mother explained to the family that the test kit should not be touched or else they would have to redo the test.

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Ben got his results back about two weeks after he returned the activated charcoal test kit. Ben did not have a radon problem at his house. Jason forgot about his test. He thought that since both families lived on the same street, there would not be a radon problem in his home either. Jason read two mystery books while the test kit sat on the shelf quietly collecting information about the radon levels in his home.

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Jason finished his report about radon and gave it to his teacher. She was so interested that she asked Jason if he would report to the class in three months when his radon test was complete. She said she wanted to know what to do if there was radon in a home or building.

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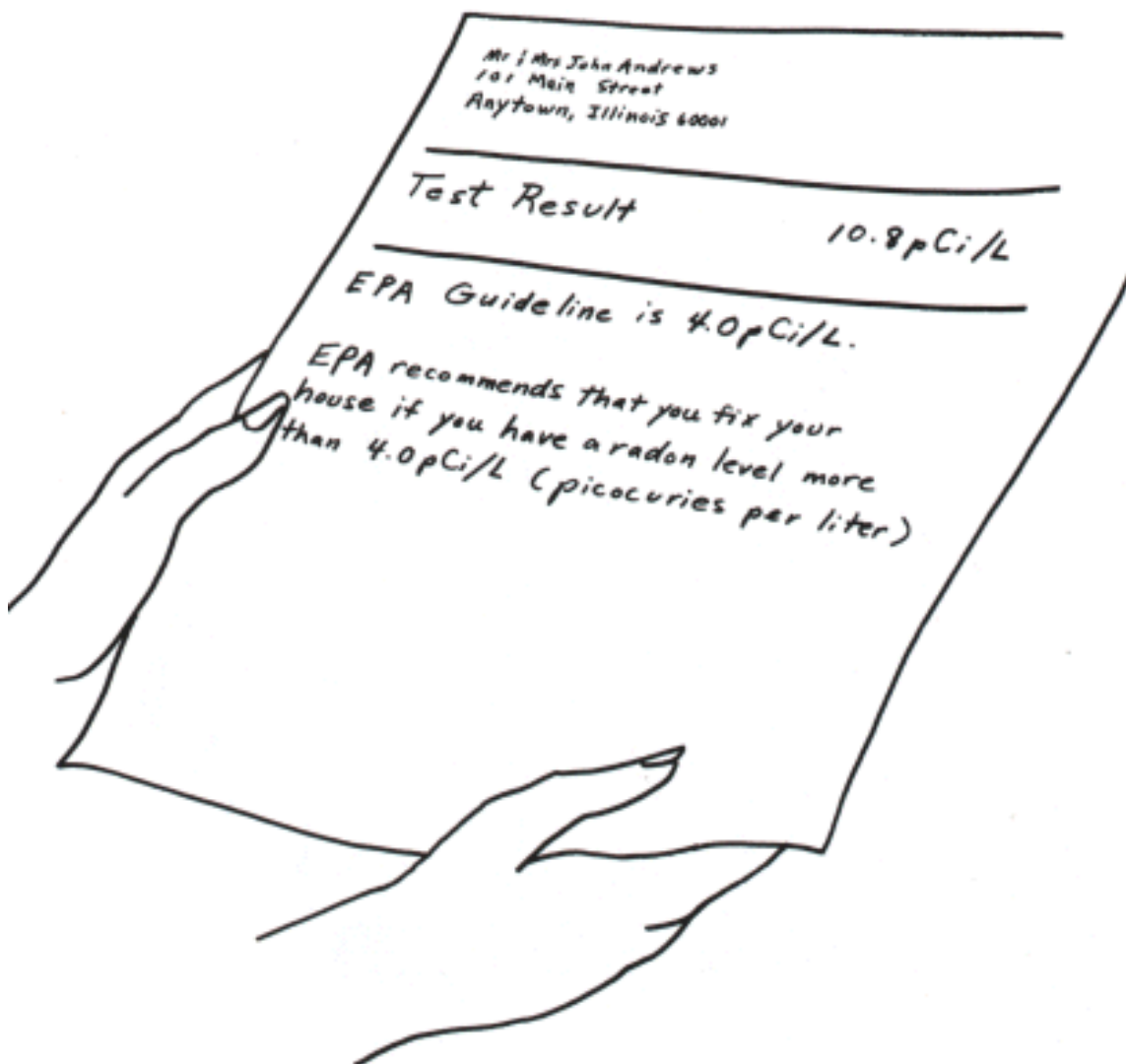
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Three months passed. Jason and his mother wrote the time and date of the test on the alpha track detector test kit. Then they carefully placed the alpha track detector test kit back in the box and mailed it to the laboratory. Jason and his mother also had to wait one to two weeks for the results.

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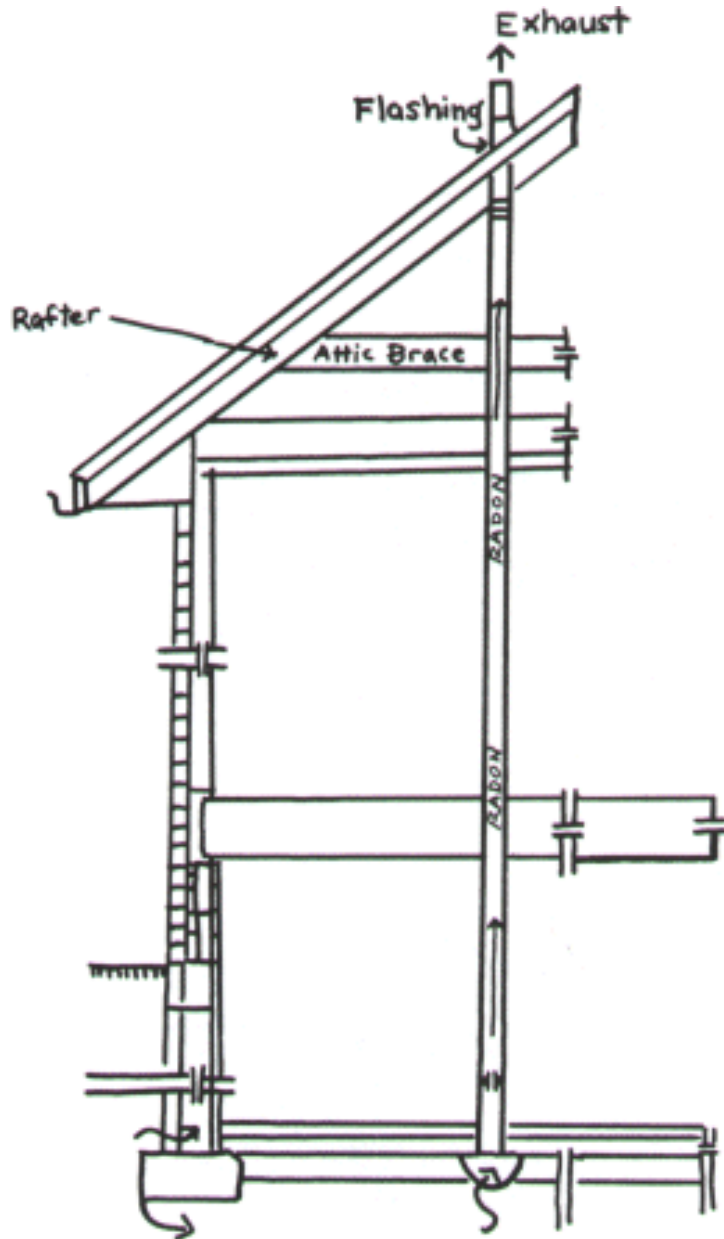
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One day after school Jason's mother called him into the kitchen and told him that their radon test results had arrived. The test said that they had too much radon in their home. Jason and his mother did a second radon test to be sure that the first test was correct. Again the test said that they had too much radon in their home.

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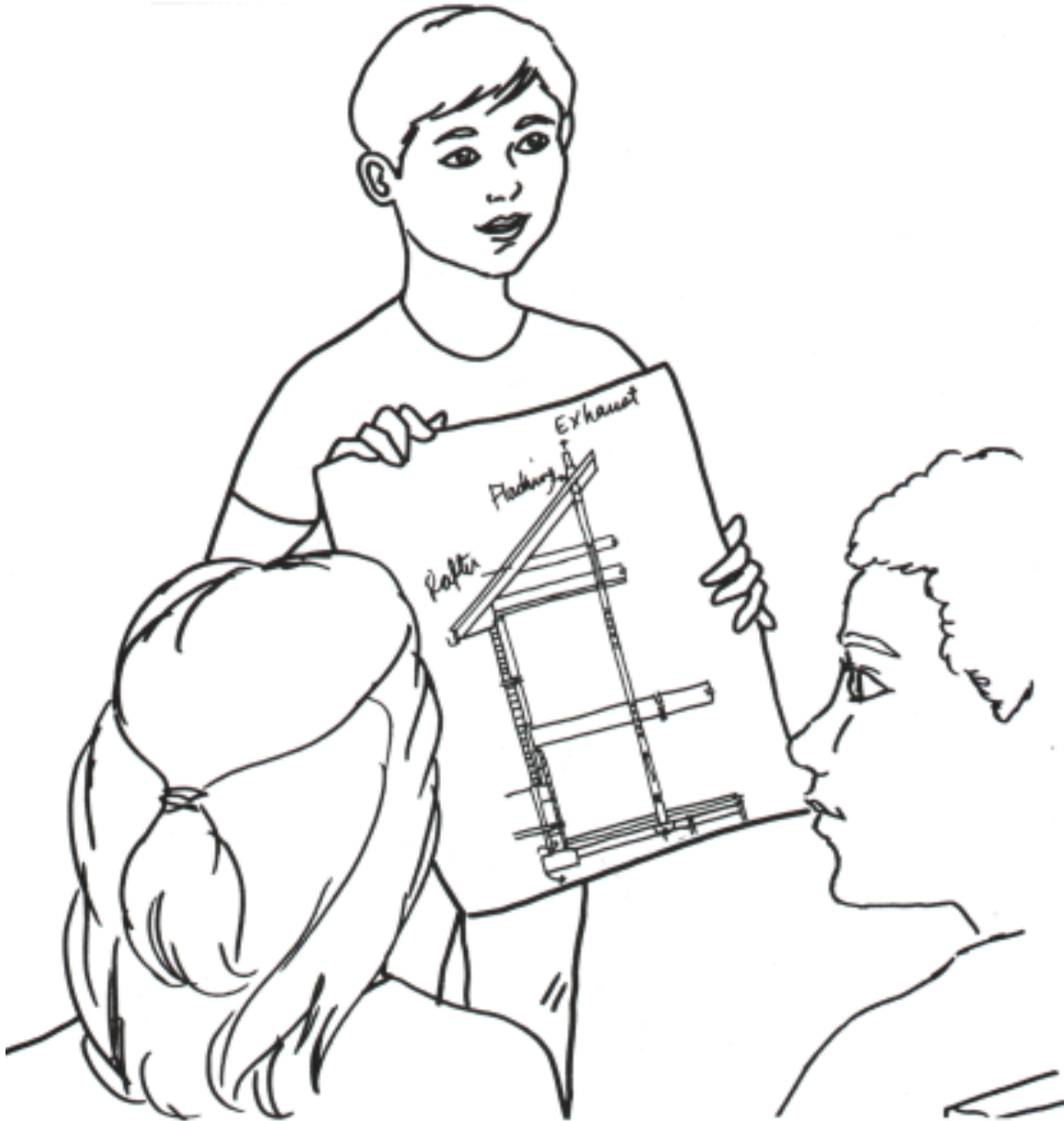
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Jason was scared until his mother explained that the radon problem can be easily fixed. Jason's mother had already called someone who had shown her a picture of a house that had a radon reduction system. This system uses a pipe that works like a chimney to prevent any radon from entering the house.

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The next week, while the contractor was fixing the radon problem at Jason's house, Jason was giving his report to his classmates. He explained that radon can be fixed by sealing cracks in floors, using a seal around pipes and sometimes placing a pipe in the home. He showed them the picture that his mother had shown to him while explaining how their radon problem would be solved. He told the class that the professionals that fix radon problems are called "mitigators".

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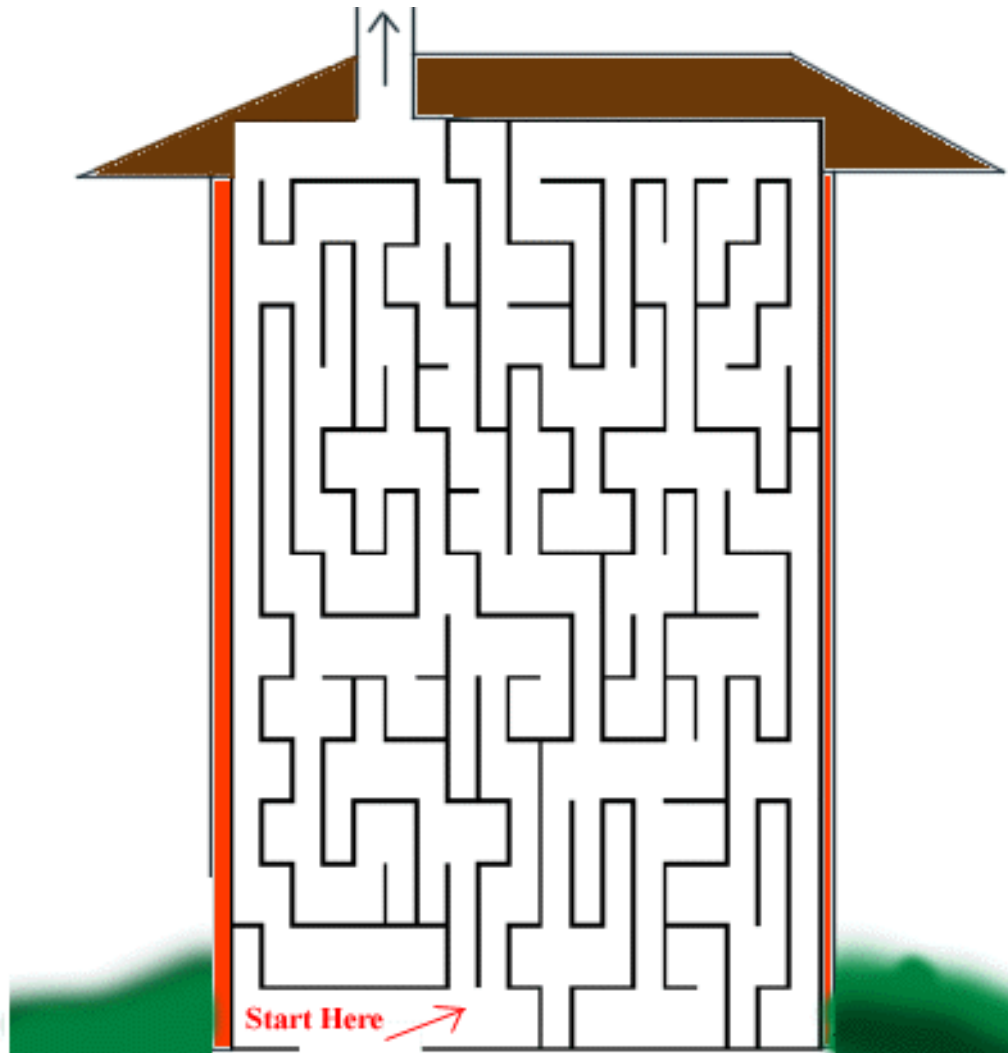


Jason's teacher was very pleased with Jason's report. She said the class had learned that radon was not really a mystery after all. Radon is just another gas that occurs in nature and as long as we are aware of how to take care of it, radon is just another part of our world.

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Help Radon escape thru this house!

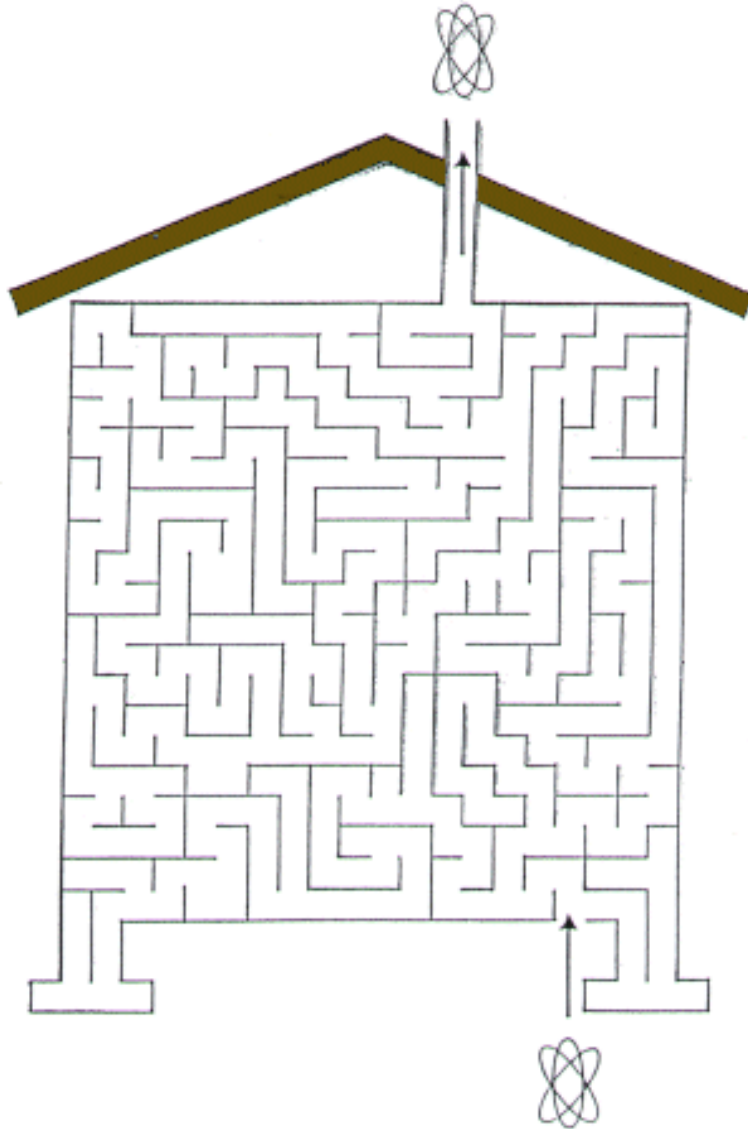


**RADON GAS PARTICLES ARE TRAPPED UNDER, AND IN YOUR HOUSE.
CAN YOU HELP THEM SAFELY ESCAPE INTO THE ATMOSPHERE
WHERE THEY WILL NOT BE HARMFUL TO YOUR HEALTH?**

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Help Radon escape thru this house!



Radon Gas particles are trapped under, and in your house. Can you help them safely escape into the atmosphere where they will not be harmful to your health?

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Use the word list on the following page to complete this Word Find puzzle. A hidden message is revealed when all the words are found.

R	P	R		O	R	A	D	I	U	M	T	M	U	I	N	A	R	U
E	A		C	H	T	L	A	E	H	C	H	A	R	C	O	A	L	T
C		D	S	H	O	R	T	T	E	R	M	K	C		D	W		
I			I	M	R	E	T	G	N	O	L	C	A		E	O		
G			D	A	S	C	H	O	O	L	S	A	N		V	R	S	E
A		E	C	E	T	L	E	V	E	L	S	R	I	W	I	K	S	R
R	S		D	R	P	I	S	O	I	L	S	T	S	A	C	I	E	U
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T	S		E	G	G	G	K	T				P	R	R	E	L	R	P
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C	S	N	R	E	D	U	C	T	I	O	N		A	D				E
A	A	H	O	M	S	E	L	C	I	T	R	A	P	L	N	E		S
C	T	O	D	E	T	E	C	T	O	R	S			D	A	I	Y	

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Active Alpha Track Breathe Cancer Canisters Charcoal Cigarettes Citizens Guide Cracks Department Detectors Devices Exposure Health Home House Indoor Radon Gas Levels Living Long Term Lung	Measure Particles Passive Radon Awareness Radiation Radium Reduction Safe Schools Sealing Short Term Smell Smoking Soils Surgeon General Taste Test Uranium Water Well Working Level	<p>All the words listed appear in the puzzle above. The words may be spelled forwards, backwards, vertically, horizontally, or diagonally. All letters should be used only once. Find the words and <u>CIRCLE THE LETTERS OR USE A LIGHT COLORED HIGHLIGHTER TO HIGHLIGHT THE LETTERS.</u></p> <p>The leftover letters will provide an important message to those who complete the puzzle! Write the leftover letters in the same order that they appear in the completed puzzle into the spaces below to find the hidden message - Good Luck!</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
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